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NEW PATTERNS IN UNDERGRADUATE EDUCATION--EMERGING CURRICULUM
MODELS FOR THE AMERICAN COLLEGE. NEW DIMENSIONS IN HIGHER
EDUCATION, NUMBER 15.

BY- AXELROD, JOSEPH

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DESCRIPTORS- *PROFESSORS, *STUDENTS, *MODELS, *CURRICULUM,
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THIS REVIEW OF A LITERATURE SEARCH PRESENTS A DESCRIPTION OF NEW MODELS OF UNDERGRADUATE CURRICULUMS THAT ARE COMING INTO EXISTENCE AND COMPARES THE PURPOSES OF THESE NEW MODELS WITH THE WEAKNESSES OF THE OLD MODELS THAT THE NEW MODELS SEEK TO CORRECT. THE NEW MODELS OF UNDERGRADUATE EDUCATION ARE SEEKING TO CREATE, EVEN ON THE LARGEST CAMPUSES, RELATIVELY SMALL PRIMARY GROUPS CONSISTING OF FACULTY MEMBERS AND STUDENTS WHO DEVELOP CLOSE TIES AND WHO CARE ABOUT ONE ANOTHER. THE NEW MODELS HAVE LIBERATED THEMSELVES FROM THE BREADTH-DEPTH CONTROVERSY BY DISCOVERING NEW PRINCIPLES OF UNITY IN UNDERGRADUATE PROGRAMS. THE NEW MODELS ARE TRYING TO BREAK DOWN THE CLASSROOM WALLS AND UNITE BOOKS WITH DIRECT EXPERIENCE TO BUILD A NEW KIND OF CURRICULAR STRUCTURE. THE NEW MODELS ARE ATTEMPTING TO REDEFINE TEACHING AND LEARNING. THEY ASK THE PROFESSOR TO BE, AND ACT LIKE, A LEARNER, ARGUING THAT THIS IS A WAY OF BECOMING A BETTER TEACHER. ALSO THEY ASK THE LEARNER TO PARTICIPATE IN TEACHING, ARGUING THAT THIS IS A WAY OF BECOMING A BETTER STUDENT. THE NEW CURRICULAR MODELS ARE DISSATISFIED WITH THE OLD GRADE AND CREDIT STRUCTURE IN ALL OF ITS ASPECTS. THE AUTHOR STATES THAT AFTER THE NEW MODELS HAVE PASSED THROUGH THEIR INITIAL STAGE OF USE, THEIR FORMULATORS AND USERS WILL FIND THE TASK OF REFINING AND CORRECTING THEM DIFFICULT AND PERHAPS IMPOSSIBLE. HE CONCLUDES (1) IT IS CRUCIAL DURING THE FORMATIVE YEARS TO TEST AND REFINE THE PRINCIPLES ON WHICH THE NEW MODELS ARE BASED AND TO JUDGE THE AVENUES BY WHICH THOSE PRINCIPLES ARE BEING, AND CAN BE, PUT INTO PRACTICE, AND (2) IF THE NEW MODELS ARE WIDELY FOLLOWED, THEY WILL CHANGE THE FACE AND SPIRIT OF AMERICAN UNDERGRADUATE EDUCATION. (TC)

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NEW DIMENSIONS

in Higher Education

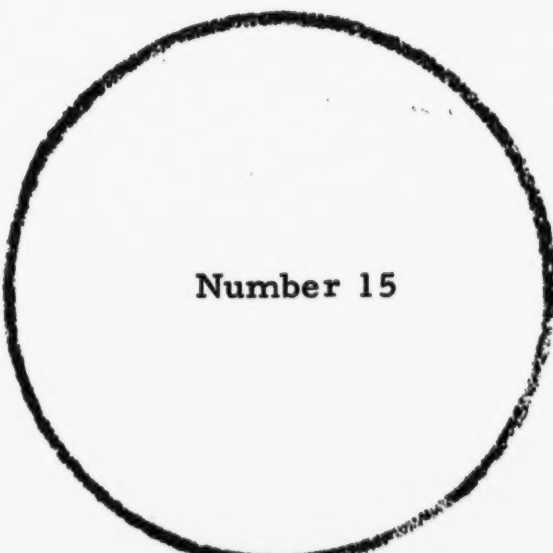
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IN HIGHER EDUCATION**



Number 15

**NEW PATTERNS
IN UNDERGRADUATE EDUCATION:
EMERGING CURRICULUM MODELS
FOR THE AMERICAN COLLEGE**

by Joseph Axelrod

Everett H. Hopkins, Editor

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

**JOHN GARDNER, Secretary
Office of Education
HAROLD HOWE II, Commissioner**

ABOUT THE AUTHOR

Joseph Axelrod has taught at the Chicago City College, the University of Chicago, and San Francisco State College. He has also held visiting professorships in Mexico City and in Berlin. He has served as Dean of the School of Humanities at the California State College at Palos Verdes and is currently Associate Dean for Academic Planning at San Francisco State College.

Dean Axelrod's research in higher education began some twenty years ago when he and four colleagues at the University of Chicago investigated the relationship between a student's "involvement" in the material of a course and the depth of his learning. He has written widely in the field of curriculum development in undergraduate colleges and has had direct experience in planning new colleges. He has also served as director of various educational research projects for the American Council on Education and the Modern Language Association of America. He is a member of the Executive Committee of the Association for General and Liberal Studies.

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FOREWORD

(If and when this manuscript is published for general distribution, the Editor will gladly prepare an appropriate Foreword for the wider audience.)

HIGHLIGHTS

New models of undergraduate curricula are now coming into existence. They attempt to combat five weaknesses found in most of the older models.

1. The old models fostered standardization in the curriculum and depersonalization in the relations between faculty and student and between student and student. The new models are experimenting with the formation of "primary groups" of students and faculty who work together and care about each other.
2. The old models set breadth in a student's education against depth and, on the whole, achieved neither. The new models have liberated themselves from this opposition and seek a new principle of unity. The distinctions between general and specialized education, liberal arts and professional curricula, transfer and terminal programs are no longer useful.
3. The old models built a wall between the campus and the surrounding community and between the campus and the world at large. In the new models, involvement in the off-campus community and the world at large has become an integral part of the curricular structure.
4. In the old models, teaching was mainly telling, and learning was mainly receiving and repeating. In the new models, faculty members become learners and students become, in a sense, teachers. Classrooms following the new models exhibit a new pattern of authority and status.
5. The old models did everything by count--class hours, course credits, grade points--and the "excellent" students turned out to be the best gamesmen. The new models are seeking to escape the yoke of number and have redefined "excellence."

If the new models are widely followed, they will change the face and spirit of American undergraduate education.

I. INTRODUCTION: THE FAILURE OF THE OLD MODELS

Many signs tell us that we are now in the early years of a new era in higher education. On both symbolic and literal levels, 1959 appears to have marked the end of the old era. It marks the end symbolically, for it was the year of the John Dewey Centennial. And on a literal level, it marks an end, and a beginning, in a wide variety of ways. It was the year in which hundreds of responses to the first Sputnik crystallized into action; specifically, it was the first year of operation of the National Defense Education Act. Master plans for higher education in various states were just then being created; California led the way by drawing up its master plan in 1959 and enacting it into law the following year. Moreover, at just about this time, according to Paul Woodring, the American teachers college came to the end of its "short, happy life," and the general education movement, characterized by Brown and Mayhew as "a serious attempt which failed," was also coming to the end of its road.¹

The first Sputnik dramatized some of the weaknesses of American higher education and foretold the closing of the era. But even before Sputnik, researchers had begun to collect the data which were to

demonstrate that the models dominant in the fifties were not working effectively. The studies which most clearly reflect the state of higher education in the late fifties include the following: for the junior colleges, Medsker's survey;² for the four-year colleges, the collection of essays edited by Sanford;³ for graduate education, the works of Berelson and Carmichael;⁴ and for professional education, the series of studies undertaken by McGrath and his associates.⁵ These studies reflect a picture of general failure.⁶

The situation was not as bleak as it could have been. The failure was general but not universal. Important changes had taken place in many college students, and research studies showed that a few institutions had a lasting influence on their students. However, the studies indicated that, by and large, changes in students were caused by factors in the educational scheme other than the instructional program.

In Changing Values in College, Jacob asked whether the curriculum had any impact on students. For example, could it be shown as an influential factor in changing students' values? Jacob's answer was that it could not.⁷ The evidence accumulated since his book appeared confirms his overall conclusions. Brown and Mayhew state: "With the exception of a few colleges, higher education has not made college graduates appreciably different from adults with comparable

ability who had not attended college."⁸ The most recent piece of evidence comes from the Student Development Study, in which an entire class of students at Berkeley and at Stanford was followed through four years. In an analysis of changes in students, neither professors nor courses appeared to be among the major influences.⁹

As the old era drew to its end and as American educators became more aware that the most important objectives of undergraduate education were not being attained, a nationwide movement to reform the undergraduate curriculum came into existence. Almost every campus in the United States, in one way or another, seems to have been influenced by these efforts. The past six or seven years have seen great ferment in curriculum planning and curriculum revision. The report of the Select Committee on Education of the Academic Senate at the University of California, Berkeley, which appeared in 1966, thus prefaces its recommendations for change: "We are far from alone in our self-examination. Nearly every major college in the country has, or has had, or is planning similar studies by similar committees. We sense that we are part of a great national--and international--development, the response to an historical crisis in higher education."¹⁰ Behind this gigantic reform movement lay a universally accepted assumption: the right curriculum could make a difference.

Such faith is not surprising. An undergraduate college exists

for the sake of its educational program. The president of Parkinson College sees the design of the instructional program as the center of a college's life:

As I have pondered the perplexities of this college, it has seemed to me that the undergraduate curriculum is the key to solving the entire range of problems. It is the curriculum which costs the most. It is the curriculum which sets the intellectual tone of the campus. It is the curriculum which demands the most from faculty. And it is the curriculum through which the college best can achieve its purposes.¹¹

John W. Gardner expresses the same faith. A thoroughgoing reform of the undergraduate curriculum, he believes, is essential. "The movement for reform at the college level is already under way," he has stated, and "it is certain to transform instruction in all major fields of knowledge."¹²

Closely related to curricular change is the increasing size of the undergraduate population. According to Brown and Mayhew, "the largest institutions of higher education will grow even larger," and "the vast majority of students will attend complex universities located chiefly in urban settings."¹³ Curricular reform and the increasing college population in urban centers are in a sense part of the same problem. The task of greatest priority in American higher education is the formulation of new undergraduate models for the large, urban college.

II. THE NEW MODELS COMBAT DEPERSONALIZATION

Harold Taylor has stated that it is extraordinary but nonetheless true that human beings "no longer look at each other as persons." He went on to explain: "As numbers of people multiply in any given enterprise, the human being tends to disappear beneath the abstraction." Taylor recalled Parkinson's Law ("Work expands so as to fill the time available for its completion"), and he presented Taylor's Law: "People tend to disappear when huddled together in large numbers."¹⁴

Recent Growth of American Campuses

The criticism most commonly heard of American institutions of higher learning is that they are becoming "too big"; and the growing population of American campuses is all too readily taken as the source of every major problem in higher education. Of course, the growth has been fast-paced. This is true not only of the large universities but of the state colleges and medium-sized universities which are also growing at a rapid rate.¹⁵ Junior college enrollments are increasing even faster than those in other sections of higher education, and new junior colleges are being steadily established.¹⁶

John W. Gardner scolds those who criticize American colleges and universities for their bigness:

I have been surprised by the censorious tone with which some critics refer to large institutions, almost as though... these institutions had deliberately chosen to do an evil thing.... The institutions being scolded for largeness today are the ones that have been most responsive to the American eagerness to broaden educational opportunities. We should have the grace to live with the consequences of our choices.¹⁷

But surely the sense of isolation and estrangement that has been characteristic of the American undergraduate cannot be accounted for by the size of colleges alone. The conditions that separate students from one another and that separate students from faculty seem clearly to stem from more complex causes. Mervin Freedman points out that one of these causes might be the intense academic competition that has pervaded most campuses. He observes that a student rarely has had "the opportunity of sharing or cooperating with other people in a venture which has meaning or value for all participants." But in many colleges and universities today, he says, there are attempts "to counter the atmosphere of competitiveness and isolation which have prevailed on most campuses since the early 1950's."¹⁸

"Primary Groups" and the Concept of Decentralization

The key to a solution appears to be the formation of "primary groups," that is, groups consisting of students and faculty who care about each other. Since the new models include experimental projects

on large, urban, non-residential campuses, it is clear that the crux of the solution does not lie in a residence hall program per se. The uniqueness of the new pattern lies, rather, in a certain relationship between the primary group and its curriculum.

Most illustrations of the new model in existence today do include common housing for students in the group. This is the case in the Stephens College House Plan, introduced in the fall of 1960. Faculty members are assigned on a full-time basis to a living-learning center and their offices are located there. All students in the House Plan take identical courses. Individualization is sought not through election of different courses but in other ways within the machinery of a prescribed curriculum.¹⁹

Michigan State University has followed basically the same framework but with vastly greater numbers of students. Their first living-learning residence hall opened in 1961; by 1967, there will be nine such halls housing 11,000 students. Approximately 10 per cent of the cost of these halls goes into academic space. Faculty advisers and counselors have offices there and a wide variety of courses are given within the halls. Everett B. Blackman reports that student performance in these programs "reflects a slightly superior record in comparison with that of students living in conventional residence halls." He points out that "closer relationships between students and faculty members are plainly evident."²⁰

A simple hypothesis provides the basis for this solution to the problem of depersonalization. If progressive depersonalization arises out of ever-increasing bigness, then humanization should occur if the structure, even as it grows larger, is decentralized into smaller, self-contained units. According to Dean E. McHenry, the essence of the plan at the University of California, Santa Cruz, "is to organize instruction in such a way that the advantages of a small college--close instruction, sense of belonging, residential setting--are combined with those of a large university."²¹

The MSU and Santa Cruz models require residence halls for their solution to the problem of isolation and impersonalization. A successful experiment at Florida State University in the spring of 1966 clustered students in common classes but did not house them together. A continuation of the experiment in the fall semester involved 330 students in eleven clusters; about 150 of them not only had courses in common but were housed together.²²

Decentralization on Urban Campuses

David Riesman has stated that he is inclined to believe the residential college has greater impact on students than the commuter college because of the close ties among students which develop on a residential campus. Nevertheless, he believes it conceivable that "a commuter college, by heroic experimentation, could become almost equally potent."²³

Such a challenge has been felt and taken up by some of the large urban colleges and universities. Brown and Mayhew report that Brooklyn College has "experimented with groupings of students to maximize interpersonal relationships and to decrease the feeling of isolation."²⁴ Although many students at Berkeley live in residence halls, the Experimental College Program organized in 1965 by Joseph Tussman and four colleagues does not house students together. Its focus is, rather, a distinctive curriculum. Dean W. B. Fretter describes the program thus: "Its essential structural feature is that it abandons the course system and, instead, organizes the educational life of the student around the study of significant themes and problems."²⁵

The Experimental Freshman-Year Program at San Francisco State College, launched in the fall of 1966, is another new effort in a large urban institution. It is designed for a group of 50 full-time students who take a block of prescribed courses during the freshman year, with all class sessions being given at the college's Downtown Center. Some of the students in EFP live on campus and commute to the inner city; others live at home or share an apartment in San Francisco. All EFP students have full use of main campus facilities, but their entire instructional program is given away from the campus. There are several philosophic principles on which this new program is based, but its primary goal is to build a small "primary group" of students and

faculty. EFP faculty members believe, "first of all, that a way must be found to combat the impersonality of most large campuses."²⁶

A project similar in some basic ways to both the Berkeley and San Francisco experiments is the Chabot College Tutorial Program. Chabot is a community college. As with the Tussman program, the Chabot Tutorial Program abandons the notion of individual courses. When it begins in the winter quarter, 1967, 125 students will be enrolled in the program for five quarters, and five faculty members from five different areas of study will devote their full time to it. Each instructor is responsible for "tutoring" the texts in all five areas; and he assumes certain major responsibilities for instruction in his own particular area. Students are to be rotated to a new tutor each quarter so that all students will study under each of the five faculty members. Students working under a given tutor are to look upon him as their "personal guide, friend, mentor and adviser in the world of learning." Instructors, for their part, "will endeavor to establish a close, personal instructional relationship with their own tutorial students and be available for consultation to members of the entire group."²⁷

New ways to combat impersonalization and isolation are thus being sought, not only by the residential colleges, large and small, but also by the commuter colleges. New models must be found, for

no progress can be made until "the techniques of bringing small groups of students into relationship with teachers so as to get the best out of both," as Sidney Sulkin puts it, have been discovered, tested, and refined.²⁸ But progress has been made since 1959. Mervin Freedman has pointed out that a modern-day Rip Van Winkle who had fallen asleep in 1959 and had awakened in 1966 would scarcely believe his eyes: "The self-studies, the revisions of the curriculum, the attempts to turn educational assembly lines into communities where faculty members and students have relationships with one another that are human would baffle him no end."²⁹

III. THE NEW MODELS SEEK A NEW UNITY

The Curriculum Patterns Survey carried on by the U. S. Office of Education³⁰ indicated that undergraduate curricula have characteristically been built in two segments: a group of courses in different fields of study designed to give "breadth" and a group of courses in a single field designed for "depth."

Except in a handful of institutions, instruction in "breadth" has been in the hands of the departments that carry responsibility for specialized curricula. On the whole this mode of organization has been ineffective. The cause for its ineffectiveness, as Algo Henderson points out, is that "the urge to specialize has nearly swamped our institutions."³¹ Other educators have pointed to an ominous future for undergraduate colleges if the "cult of specialization" continues unabated.³² The fragmentation of knowledge which followed World War II had a predictable effect on course offerings. But course proliferation took place not only in the natural and social sciences, where the explosion of knowledge was most marked, but also in such fields as English and history.³³

Administrators became concerned about proliferation of courses

because of the drain on the budget. They were concerned, too, with the appropriateness of means to ends. "The curse of departmentalization," as the president of Goucher College expressed it, "gets in the way of the student's education."³⁴ The explosion of knowledge thus had the most serious consequences on curricular development. Intensive specialization at the undergraduate level became characteristic of the older curricular models.

Within the old framework, the problem is both severe and insoluble. The dean of Columbia College presents the problem well. On the one hand, he states, "if one is to do anything in science... the budding scientist must start early, move fast, and look at nothing else." On the other hand, for the young physicist or biologist "the consequences of a truncated education may be catastrophic."³⁵

As if that dilemma were not enough, the pressures toward specialization increasingly encourage premature decisions. The Select Committee on Education at Berkeley warns the faculty: "We need to offer protection, particularly to beginning students, against premature specialization."³⁶ Sometimes, even when a professional school recommends broad undergraduate training, such programs may not be available. This is the situation reported by the American Association of Theological Schools; their expectations, they report, are impossible to fulfill because of "the accelerating rate at which students in undergraduate programs at some of our most distinguished

colleges and universities are urged toward a major field."³⁷ William C. DeVane, however, believes that on the whole the pressure toward specialization seems to be coming from the graduate disciplines; he reports "a severe pressure from above by the strong trend toward early and narrow specialization as more and more students press toward graduate and professional schools."³⁸ There is a great deal of indecision, even among the most studious high school students as they enter college and learn about themselves and the world. The Center for Research and Development in Higher Education at Berkeley, for example, found that 40 per cent of the winners and runners-up in the National Merit Scholarship competition changed their intended field of specialization between the summer before college entrance and the end of the sophomore year.³⁹ A strong commitment even at the opening of the junior year is questionable; Brown and Mayhew report that well over half of all college graduates are not working in fields related to their undergraduate majors.⁴⁰ Sanford also reports that relatively few of the people in the professions today are actually working at jobs for which they were trained. The most effective education, Sanford argues, is not one which prepares for a particular job but one which develops "the capacity to go on learning."⁴¹

The Search for Greater Breadth

In recent years, students have become more cautious about early and narrow specialization. The proportion of students enrolling

in the "no preference" category at Michigan State University rose from 16 per cent in 1955 to over 25 per cent in 1965.⁴² The assistant dean of undergraduate studies at Stanford University reported that students are becoming "increasingly dissatisfied with compartmentalization and specialization of knowledge. They are instead seeking breadth and unity in their studies."⁴³

In 1963, Clark Kerr listed a number of changes which he believes must take place on American campuses; the most important of them, he states, will be "directed toward overcoming the fractionalization of the intellectual world."⁴⁴ This fractionalization is indeed being overcome at the point where the most fruitful research is being done: the reorganization of the disciplines which is already in evidence in the research institutes is also beginning to be reflected in the new undergraduate models. The old models have been dominated by the false notion that the traditional disciplines are "real entities which... adequately reflect processes of life beyond the academic world."⁴⁵ New conditions demand the reorganization of the disciplines, and the new curriculum models are responding to these conditions. "The arts that liberated human eyes must be constituted anew as they have been reconstituted to meet new problems in various periods of their past," declares Richard McKeon. But McKeon believes it is "unlikely that we shall be able to transform existing departmentalization of subject matters to make one of the traditional subjects, or

one combination of them, particularly relevant to liberation or humanity."⁴⁶

The greatest confusion in discussions on college curricula during the past decade has risen out of the use of the terms breadth and depth. It is not possible to conceive of a broad program as achieving depth or of a specialized program as achieving breadth; such conceptions are contradictory. The very curricular framework which sets up the opposition between breadth and depth thus induces the opposition between general and specialized education and between liberal and professional education. The terms suggest that a major program in sociology, for example, must achieve greater breadth, by the very nature of things, than a major in behavioral science. It suggests further that a major program in criminology or social welfare must be narrower than one in sociology. These are examples of the assumptions which pervade the academic world, caught as it has been in the trap of the breadth-depth concept.

The new models have succeeded in casting off this framework. In discussing the new Beloit curriculum, Dean Kolb states: "We are not placing breadth and depth in opposition to one another." Kolb redefines the two terms and makes the only desirable kind of breadth identical with the only desirable kind of depth:

Modern man is a specialist and specialization requires knowledge of a particular discipline or profession. But

such depth itself becomes a form of existential dilettantism unless, standing in his specialty, the specialist sees his work as related to his life, his discipline as related to other disciplines, and his knowledge as related to the world of action and value. If this is breadth, it is also a more profound depth--a depth without which we cannot hope to live in the modern world.⁴⁷

The dean of Columbia College, too, avoids the trap when he speaks of the "false issue of general versus special education."⁴⁸

Perhaps Alfred North Whitehead's famous definition of the goals of education can supply the key to a new approach: "What we should aim at producing is men who possess both culture and expert knowledge in some special direction. Their expert knowledge will give them the ground to start from, and their culture will lead them as deep as philosophy and high as art."⁴⁹ Whitehead's definition is a superior one, not because it is a more exact statement of the goals of education than those found in a thousand American college bulletins, but because his terms reflect the unity of knowledge. It is not a new definition; yet it suggests the direction in which the new curriculum models are moving.

Interdisciplinary Programs

A clear trend in undergraduate curriculum design since 1960 is described by Norman Charles as "the growing stress upon the structural rather than the substantive aspects of knowledge." Charles explains this new emphasis:

Curricular thinking in higher education has been geared to a belief in the need for "coverage" of content. The new emphasis seems to be on the process of learning in each discipline, with the objective that the student will master the structural principles in a variety of subjects and then be capable of making an infinite number of applications.⁵⁰

One of the signs of this trend is a return to the interdisciplinary course and the recommendation on many campuses that means be discovered for supporting such courses even though they are not within the jurisdiction of one department.⁵¹ The Tussman experiment at Berkeley is an even bolder interdisciplinary venture; it abandons the notion of "course" altogether and sets up a four-semester interdisciplinary program, not divided into separate courses, taught by a mathematician, a poet, a lawyer, a political scientist, and a philosopher.⁵² Another plan is suggested by William C. DeVane who would broaden undergraduate major fields into interdisciplinary programs.⁵³ The interdisciplinary principle plays a central role at the new California State College located in Dominguez Hills; all baccalaureate programs require a dual major, one in a traditional discipline and the other in an interdisciplinary field. An even more radical plan is set forth by Joseph J. Schwab who suggests a new relationship between the totality of the liberal arts and a single field of study.⁵⁴ The interdisciplinary principle also underlies many of the newly designed programs for adults. The Bachelor of Liberal Studies program at the University of Oklahoma, for example, is

built on the theme of man in the twentieth century.⁵⁵

Liberation from the conceptual trap of the breadth-depth framework can take place only as progress is made toward the discovery of a workable principle of unity for baccalaureate programs. In the undergraduate curriculum models exemplified by Stephens and Shimer, by New College of Hofstra and Antioch, and by Raymond and Goddard, the depth-breadth issue is on its way to being resolved. While these models were designed for the small liberal arts college, larger institutions are now beginning to explore the relevance of curriculum structures which have abandoned the opposition between general education and specialized studies, between the liberal arts and professional education, between terminal and transfer curricula.⁵⁶

IV. THE NEW CURRICULA REJOIN THE WORLD OUTSIDE

"When education ceases to be concerned with the societal problems of the day," Everett H. Hopkins has stated, "then that society is already beginning to decay."⁵⁷ The Select Faculty Committee at Berkeley reports that there has been too little connection between the curriculum and the world outside.⁵⁸ According to many students: "there is a violent, almost ludicrous disparity between the way you live, think, act, talk in a university dormitory and the way you do all these things...on the outside."⁵⁹ Research studies also show that, on the whole, students fail to see the relevance of academic learning to their deeper interests and concerns. For a great many students, according to Katz and Sanford, academic demands are seen merely as stepping stones toward a career or "simply as hurdles society puts in the way to test their obedience, endurance, and conformity."⁶⁰

Community Involvement Programs

The wall between the curriculum and the world outside is, however, slowly being broken down. There are now perhaps a hundred campuses which have community involvement programs in one form or another.⁶¹ President Hesburgh of Notre Dame University believes strongly that college and university faculties "must accept as part of

the whole educational system this experience of service," and Mervin Freedman presents evidence to indicate that "an ethic of social service has been assuming more moment in the lives of students."⁶²

Projects such as tutorial programs for culturally disadvantaged children often provide a profound educational experience. In the old educational models, however, it has not been easy to incorporate such experiences into the curricular and credit structure. It is ironic that students should receive "credit" for what may be a relatively meaningless class experience and none for a community experience even when it is accompanied by a training seminar.⁶³

In the new curriculum models, community involvement has become part of the very fabric of course assignments. In the urban institutions, the city itself is used in a systematic way as an educational laboratory. A relationship between two major educational means--books and direct experiences in the city--is being worked out so that each can enrich the other. The faculty of the Experimental Freshman-Year Program at San Francisco State College, for example, is strongly convinced that courses built on this principle should lead more directly to long-range educational goals than should courses that are primarily book-centered and concept-oriented.⁶⁴ In an ideal undergraduate curriculum, Sanford states, "the great issues that concern us all, but which academic men rarely let creep into

their courses, will become the major focus." He believes such a curriculum would give emphasis to "the human problems that exist in the community where the young people live" and would not discourage students from going off-campus to look into such problems "or even to engage in actions affecting them."⁶⁵ For the urban college and university, the relationship between the curriculum and the community is part of a larger problem. Gardner characterizes the city as the heart and brain of an industrial society. But our cities today, he points out, are plagued with a variety of ills; the solutions, he declares, "must be near the top of the national agenda for the next decade." Although no institutions are better equipped for that struggle than colleges and universities, "they have played a negligible role thus far," Gardner claims.⁶⁶

Developments in International Education

The old curriculum models not only isolated the curriculum from the immediate campus community but also isolated the curriculum from the world community. A study involving almost two thousand students at 175 colleges and universities showed that the 1960 senior's knowledge "of foreign countries and his understanding of the basic principles and the current problems of American foreign policy are inadequate for the performance of his responsibilities, either as a plain citizen or as a community leader."⁶⁷

Since that study, however, education in international affairs

into the course and credit structure of curricula at home.

The new curriculum models, on the other hand, are characterized by external mechanisms that encourage the opening of pathways to the world outside. Community involvement projects, planned not as extracurricular activities but built into the very fabric of the curriculum, have proved an important source for breathing life into the educational program. But the new models are not content to provide educational opportunities in the immediate off-campus community; curricula which exemplify the new patterns have rejoined the world community as well.

V. A CHANGING PERCEPTION OF STUDENTS: FROM INFORMATION STORAGE AND RETRIEVAL UNITS TO SELF-DIRECTIVE INDIVIDUALS

Since the curriculum of a college is more than a design on paper, curricular reform must entail more than a change in the formal requirements and procedures leading to a degree. "Little is likely to be accomplished by artificial devices," state Cole and Lewis. "Men are more important than methods."⁷² Dressel emphasizes the same point. "Many intensive curriculum reorganizations are destroyed," he states, when "departments or faculty members are given the responsibility for instrumentation."⁷³ Robert F. Byrne insists that changes in a curriculum can take place "only after revisions in the faculty and in the spirit and goals of an institution have already occurred."⁷⁴ Clearly, curriculum design and instructional strategy are the two sides of the same coin. It is not likely therefore that sound or lasting curriculum reform can take place on a campus where the teaching function is subtly discounted.

The deterioration of the teaching function in this country appears to have two major causes. The first is the opposition of teaching and research and the creation of an ethos in which faculty members are rewarded for activities other than teaching; the second is an out-

moded notion of how human beings learn. This view, still held by many college faculty members, leads them to adopt a set of classroom practices that, at best, can have only limited effectiveness.

On campuses following the old curriculum models, it is not likely that either the distinguished scholar or his disciple just out of graduate school will give excellent undergraduate instruction. William C. DeVane points out that the distinguished scholar is likely to treat undergraduates as future scholars in his own field, and "if he is teaching freshmen, the course will probably be taught as if it were the first course of the long journey toward the doctor's degree in that discipline." The young scholar just out of graduate school is likely to be even narrower than his mentor, DeVane asserts.⁷⁵ It is common knowledge that senior scholars do not like to teach freshman courses. The Select Committee at Berkeley believes this aversion may, in part, indicate a defect in the freshman courses: "A course that fails to attract the interest of experienced and talented scholars may be failing to arouse interest in freshmen as well."⁷⁶ The Berkeley study committee therefore recommends the adoption of a number of measures which it hopes will create an ethos hospitable to teaching.⁷⁷

Outmoded Learning Theories

Such an ethos cannot, however, develop unless there is more than a passing interest among college faculty members in the nature of

learning. The psychology of learning and the field of personality theory have a voluminous literature, and the current patterns of pressures on college teachers do not encourage a serious commitment to become well informed in these fields of study. Hence the myths and common-sense notions about personality and learning--or superficial popularizations of recent findings--prevalent among the lay public also obtain among the large majority of college faculty members. On campuses following the old models, instructional practices are based on a theory of personality which, according to Katz and Sanford, was current in the twenties and is now thoroughly outmoded.⁷⁸ The image of a learner's soul as an empty pitcher into which the teacher pours the fluid of knowledge, is "ineradicable," states Jacob Klein.⁷⁹

The problem is currently complicated by the appearance of new auto-instructional media which, when perfected, can virtually replace faculty members in the transmission of factual information and in the teaching of low-level technical skills. Benjamin S. Bloom points out that with respect to "knowledge or simple skills," a great variety of instructional methods yield essentially equal outcomes; large class, small class, TV instruction, audiovisual methods, lecture, discussion, demonstration, team teaching, programmed instruction, authoritarian and nonauthoritarian instructional procedures, etc., "all appear to be equally effective methods in helping the student

learn more information or simple skills." The machine will by no means replace the teacher, it is claimed; what will happen, we are told, is that teachers will be freed to perform instructional tasks of a higher order. The difficulty here rests in the fact that most faculty members, once they are thus freed, do not appear to know how to go about performing the tasks for which the machines freed them. Consequently, new instructional approaches must be employed. These are what Benjamin S. Bloom calls the "dialectic" as opposed to the "didactic" approaches.⁸⁰

Student-Centered Approaches

The "dialectic" approach, based on the notion that learning is best induced by the process of joint inquiry by professor and student, has been adopted by the colleges following the new curriculum models. Winslow R. Hatch thus summarizes the research of the late fifties on this subject: "The new research... suggests that problem-oriented approaches to learning are effective; that inquiry by students and teachers is a promising academic way of life that should be examined for its pedagogical and curricular implications."⁸¹

Lynn White, Jr., characterizes the new role for faculty members: "The faculty are simply the more mature students with a special responsibility for keeping the conversation going."⁸² The new curriculum models in undergraduate education strongly reflect a changing

role for both students and professors. As the professor takes on certain functions that the old models assigned only to students, the student must assume certain functions that the old models assigned only to professors. The new view of teaching and learning as an engagement in joint inquiry thus suggests serious changes in the old pattern of authority and status. Harold Taylor believes that the most effective modes of learning do not require the continual presence of an educational "authority." The crux of the process, Taylor asserts, is for students to learn "how to teach each other and how to learn from each other, from books, from experience, from their teachers, or from anything."⁸³

Some of the new models emphasize student participation in course planning. For example, one of the principles underlying the Experimental Freshman-Year Program at San Francisco State College is that students "ought to have an opportunity to participate in planning the structure of their courses and in formulating their own assignments."⁸⁴ There appear to be two reasons for advocating such participation. First of all, if such participation is serious, it creates better motivation in students. But the second reason is more important: the process itself, it is claimed, has educational value; it helps prepare students for a world in which, one hopes, significant aspects of their lives will be self-directive.⁸⁵

Freedman adduces yet another argument for student participation

in course planning. He believes that the faculty member committed to a single discipline, using the same approaches over a span of many years, may have difficulty in looking at problems in new ways.

"The flexibility of youth, the sensitivity of young people to new experience," Freedman points out, "may well serve as an antidote."⁸⁶

Thus Freedman believes that the drastic alteration in status and authority relationships among faculty and students is not only beneficial for student growth but for faculty members as well.

Today's trend was anticipated fifteen years ago by Carl R. Rogers.

He said at that time:

It seems to me that anything that can be taught to another is relatively inconsequential, and has little or no significant influence on behavior. That sounds so ridiculous, I can't help but question it at the same time that I present it.... I have come to feel that the only learning which significantly influences behavior is self-discovered, self-appropriated learning. Such self-discovered learning, truth that has been personally appropriated and assimilated in experience, cannot be directly communicated to another. As soon as an individual tries to communicate such experience directly, often with a quite natural enthusiasm, it becomes teaching, and its results are inconsequential.⁸⁷

VI. THE NEW CURRICULA REDEFINE EXCELLENCE

Course Requirement Patterns

An extensive survey of baccalaureate requirements recently carried out by the U. S. Office of Education confirms the general impression held in the academic world about the dominant bachelor's degree pattern. Approximately one-fourth of the bachelor of arts requirements are in major-field courses, general education requirements account for about 50 per cent, and the remaining one-fourth is reserved for elective courses. Bachelor of Science programs tend toward larger requirements in the major subject with a reduction in elective courses.⁸⁸

As undergraduate curricula are described in most college bulletins, they appear to have a discernible structure. When records of students are examined, however, the curricula which have such a clear design in the college bulletin are often found to have been modified beyond recognition. The rules of the bookkeeping system used by most college registrars is unusually complex. A course in the major field may actually "count" as an elective course; a course in a field related to the major may "count" as part of the major; a lower division course in the major field may "count" as part of the

breadth requirement; courses prerequisite to certain courses in the major "count" as electives even though they are in fact required courses. A study of actual student records proves the soundness of David B. Truman's judgment: "What we label a curriculum too often can be called a structure only by courtesy."⁸⁹ The president of Smith College believes the "mechanical device of the course and the credit" is a most formidable barrier to curricular change.⁹⁰ The president of Goucher College thus characterizes the old models: "The sacred 120 credit hours are still the measure of the educated man, and the guiding notion for the student is still a mechanical accumulation of credits."⁹¹

Alternatives to Credit-Hours and Grades

Some institutions have attempted their escape from the chaos of "units" or "points" by substituting the course as the basic counting unit for the degree. For example, in 1964 the University of Santa Clara instituted a new bookkeeping system which requires freshmen and sophomores to study four courses per term while juniors and seniors study three courses per term.⁹² At the California State College, Dominguez Hills, courses constitute the basic counting units. In addition, the overall design for the bachelor's degree is new: a program in basic studies, consisting of specially designed courses required of all students, absorbs about 40 per cent of the work toward the degree; a double major--in a traditional discipline

University inaugurated a similar plan. This is an interdepartmental major in which "the customary pattern of formal classroom work gives way to colloquiums and group tutorials and a substantial amount of independent reading and writing. No tests are given or grades assigned. Comprehensive examinations, set and evaluated by an outside examiner, are given at the end of the junior and senior years."⁹⁶

It is no accident that these experimental programs have not only abandoned the credit hour system but have also sought to escape from the traditional grading system. Louis Benezet's view of the grading system is shared by a large segment of faculty members and honors students on American campuses: the obsession with grades prevents students from learning. Benezet feels it is possible to interest students in intrinsic learning "once we rid ourselves of the ancient hobby of making book on each performance."⁹⁷ A student writing in the 1963 yearbook of one of the country's most prestigious colleges states:

The professor gives the grades and thus has the upper hand. The student who must present his transcript to the world in the future has no choice but to be cowed, no choice but to work like hell and try to fool the professor into believing that what has been assigned has been done.... The whole academic set-up is turning from one of mutual endeavor to one of mutual deceit.⁹⁸

President Cole of Lake Forest College points out that the grad-

ing system represents to many faculty members and students the equivalent on campus of the labor and management relationship in industry. The faculty represents management; the students, labor; grades are the equivalent of wages. It is the object of management to get the maximum expenditure of energy out of labor with a minimum output of wages; it is the object of labor to get the maximum expenditure of wages out of management with a minimum output of energy. President Cole observes that the grading system focuses great attention on what is essentially external bookkeeping. But, worse than that, it creates a kind of rivalry between teacher and student and inhibits the teaching-learning process. It is, of course, not the act of grading or evaluating the student that is the evil but rather the totally public nature of the act and the uses to which grades are put.⁹⁹ The grading problem is extensively considered in the Report of the Select Committee on Education at the University of California at Berkeley, which contains recommendations to permit the Pass-Fail option in certain cases, to defer grading in certain cases, to postpone the beginning of grade-point average computation, and to experiment further with new grading practices.¹⁰⁰ Pass-Fail options have been introduced at Cornell, Princeton, California Institute of Technology (where in a current experiment, only Pass-Fail grades are given in the freshman year), and many other campuses. The University of California, Santa Cruz, has been authorized to operate

with Pass-Fail grades only in all courses.

In an effort to combat some of the evils of the grading system, many institutions have introduced comprehensive examinations. Among other advantages, comprehensive examinations permit greater curricular flexibility and more uniform grading standards. Moreover, the teacher-student relationship need not become contaminated by the grading relationship.¹⁰¹

The credit and grading system characteristic of the old curriculum models tends to reward a certain kind of student, the one whom Salvatore R. Maddi calls "the achiever." This is the kind of individual who stresses "action more than feeling, production more than contemplation, contractual relationships more than intimate ones, the well-defined and obvious more than the complex and ambiguous, and success more than understanding."¹⁰² He is the one to whom to give the "A" grades. Alfred North Whitehead wrote that he was "profoundly suspicious of the 'A'-man. He can say back what you want to hear in an examination, and...you must give him his A if he says it back; but the ability, not to say the willingness, to give you back what is expected of him argues a certain shallowness and superficiality."¹⁰³ Maddi tells us that a society "organized to foster achievers will probably show rapid progress in economic and technological development." For a society which is underdeveloped

economically and technologically, this type of ethos, Maddi states, might be appropriate. But he questions its appropriateness for contemporary American society. Indeed, he fears that "unless some new or more comprehensive ethos has been developing all along, decline may ensue."¹⁰⁴

It appears imperative therefore to make headway in the redefinition of "excellence" in the academic world. The future of our society, in fact, is at stake.

VII. RECAPITULATION: THE PAST AND THE FUTURE

The old models of undergraduate education have fostered standardization in the curriculum and depersonalization in relations between faculty and student and between student and student. The new models are seeking to create, even on the largest campuses, relatively small "primary groups" consisting of faculty members and students who develop close ties and who care about one another.

The old models have set "breadth" in a student's education against "depth" and have ended by achieving neither breadth nor depth. The new models are finding meaningless in today's world such curricular oppositions built on the old framework as general education opposed to specialized education, breadth requirements opposed to major field requirements, a liberal arts curriculum opposed to a professional curriculum, a transfer program opposed to a terminal program. The new models have liberated themselves from the breadth-depth opposition by discovering new principles of unity in undergraduate programs.

The old models have built a wall between the campus and the surrounding community. They have relegated campus-community

relationships to the extra-curriculum and have thus isolated the curriculum from the world outside. The new models are trying to break down the classroom walls and unite books with direct experience to build a new kind of curricular structure. The new curricular models have reunited both the local community and the world community.

The old models have been based on outdated and inaccurate notions of how human beings learn. They have considered teaching primarily as telling, and learning primarily as receiving and repeating. In the whole process the student is normally and quite naturally treated as a kind of information storage and retrieval unit. Storage took place during class and study sessions; retrieval took place during examination sessions. The new models are attempting to redefine teaching and learning. They ask the professor to be, and act like, a learner, arguing that this is a way of becoming a better teacher. And they ask the learner to participate in teaching, arguing that this is a way of becoming a better student. In the new models, therefore, teaching and learning are seen not as different processes but as a single process of cooperative inquiry.

In the old models, the curriculum has been grounded in the concept of number. Everything has been by count: class hours, course credits, grade points. So many credits for so many hours for so many weeks for so many years, with a grade-point average not under

such-and-such, yield the degree. The traditional counting system has made curriculum planning an impossibility, has destroyed the teacher-learner relationship, and has labeled those students "excellent" who turn out to be the best gamesmen. The new curricular models are dissatisfied with the old grade and credit structure in all of its aspects. They are trying to redefine excellence, to find new ways of appraising it, and to invent new ways of keeping records of it.

Because the old models for the undergraduate curriculum have been based on outdated notions of how human beings learn, because they have fostered depersonalization in human relationships, and because they have demanded that the most important judgments about students be made by counting units and points, a pattern of freedoms and controls has emerged which is totally wrong. It is wrong because it moves contrary to the long-range educational goals every college professes. The old models have failed not because they have given the student too much freedom or too little but because the total structure of freedom and control, of authority and status, has been built on false principles. It is not in the quantity but in the total pattern of freedoms and controls that the new model differs from the old.

The construction of the new models has just begun. These

models will remain in a formative stage for a number of years, during which they must be tested, refined, and corrected. After they have passed through their initial stage, their formulators and users will find the task of refining and correcting them difficult and perhaps impossible. It is therefore crucial during the formative years to test and refine the principles on which the new models are based and to judge the avenues by which those principles are being, and can be, put into practice. An intensive research program, carried out during these earlier stages of formulation and practice, is essential.

At the 1966 National Conference on Higher Education, William L. Kolb stated the problem: "The inadequacy of past forms of education and the collective mindlessness of many of the contemporary modes of education...cry out for change and experimentation."¹⁰⁵ New models are already beginning to emerge which may change the face and spirit of American undergraduate education.

FOOTNOTES

1. Paul Woodring, "The Short, Happy Life of the Teachers College." In Paul Woodring and John Scanlon, eds., American Education Today. New York, McGraw-Hill, 1963. Hugh S. Brown and Lewis B. Mayhew, American Higher Education, p. 105. New York, Center for Applied Research in Education, 1965.
2. Leland L. Medsker, The Junior College: Progress and Prospect. New York, McGraw-Hill, 1960.
3. Nevitt Sanford, ed., The American College. New York, John Wiley, 1962.
4. Bernard Berelson, Graduate Education in the United States. New York, McGraw-Hill, 1960. Oliver C. Carmichael, Graduate Education: A Critique and a Program. New York, Harper, 1961.
5. Earl J. McGrath, executive officer of the Institute of Higher Education, Teachers College, Columbia University, and his associates, are the authors of a series of reports (published for the Institute of Higher Education by the Bureau of Publications, Teachers College, Columbia University), dealing with professional education--journalism, engineering, pharmacy, music, business, home economics, and social work.
6. Joseph Axelrod, "New Patterns of Internal Organizations." In Logan Wilson, ed., Emerging Patterns in American Higher Education, p. 41-42. Washington, American Council on Education, 1965.
7. Philip E. Jacob, Changing Values in Colleges: An Exploratory Study of the Impact of College Teaching, p. 59. New York, Harper, 1958.
8. Brown and Mayhew, op. cit., p. 80. See also Ruth Eckert, "Colleges and Universities: Programs." Encyclopedia of Educational Research, p. 275. New York, Macmillan, 1960. Morris Keeton, "The Climate of Learning in College." College and University Bulletin. Washington, Association for Higher Education, November 15, 1962. Sanford, op. cit., p. 419.

9. The study is reported by Joseph Katz and Nevitt Sanford, "Seventeen to Twenty-Two: The Turbulent Years." Stanford Today, Series 1, No. 15. January, 1966.
10. Education at Berkeley: Report of the Select Committee on Education, p. 3. Berkeley, University of California Press, 1966.
11. From a letter addressed to a faculty committee, cited in Lewis B. Mayhew, "Curriculum Case Study." In G. Kerry Smith, ed., Current Issues in Higher Education, 1965, p. 222-29. Washington, Association for Higher Education, 1965.
12. John W. Gardner, Agenda for the Colleges and Universities: Higher Education in the Innovative Society, p. 3. New York, Academy for Educational Development, 1965. The talk, originally delivered at the 1965 California Conference on Higher Education, was also reprinted in Journal of Higher Education, vol. 36, p. 7. October, 1965.
13. Brown and Mayhew, op. cit., p. 100.
14. From an address given at Wayne State University, April 23, 1964, quoted in Educational Record, vol. 46, No. 3, p. 334. Summer, 1965.
15. A. W. Maucker, "Aligning Priorities in State Colleges and Medium-Sized Universities." In Smith, ed., op. cit., p. 179.
16. Brown and Mayhew, op. cit., p. 37.
17. Gardner, op. cit., p. 7-8.
18. Mervin B. Freedman, "Pressures on Students." In Smith, ed., op. cit., Current Issues, p. 149. This analysis supplies the basis for Freedman's reading of the Berkeley events of 1964-65 (p. 149-50), and the Byrne report confirms that interpretation. The Berkeley group of political activists was, according to the Byrne report, "comparatively small"; nevertheless, in certain ways this group was not atypical: "It should be emphasized...that their isolation was by no means unique." Jerome C. Byrne, "Special Report to the Forbes Committee of the Board of Regents, The University of California." Reprinted in the Los Angeles Times, Sec. 4, p. 3. May 12, 1965.
19. Ralph C. Leyden, ed., The Stephens College House Plan: Experimentation and Evaluation, p. 91. Columbia, Mo., Stephens College, 1966.

20. Everett B. Blackman, "Residence Halls as an Integral Part of the Learning Environment," p. 1-2. Presented at the National Council on Higher Education, Association for Higher Education, March 15, 1966 (mimeographed).
21. Dean E. McHenry, "The University of California, Santa Cruz." In W. Hugh Strickler, ed., Experimental Colleges, p. 136-37. Tallahassee, Florida State University, 1964.
22. Stephen S. Winters, "Anti-Automation Education." Presented at the Distinguished Alumnae Seminar, Florida State University, July 18, 1966 (mimeographed). The 1966 experiment and future plans are also described in Time, p. 48. September 9, 1966.
23. David Riesman, Foreword to The Reasonable Adventurer: A Study of the Development of Thirty-Six Undergraduates at Princeton, p. xvi. Pittsburgh, University of Pittsburgh Press, 1964.
24. Brown and Mayhew, op. cit., p. 80.
25. Quoted from the Letter to Entering Freshmen, by Dean W. B. Fretter, dated July, 1965, in Education at Berkeley, op. cit., p. 132. Although the students in the program do not live together, the program is helped "in its search for a spirit of community" by the location of its formal and informal sessions in a small, separate building.
26. Joseph Axelrod, "What Is the EFP?", p. 1. San Francisco, San Francisco State College, 1966 (mimeographed).
27. Mary Lou FitzGerald and Eugene F. Marker, "The Chabot College Tutorial Program," p. 7-8 (mimeographed).
28. The Challenge of Curricular Change, p. xxiii. New York, College Entrance Examination Board, 1966.
29. Mervin Freedman, "Effects of Peer Institutions." Presented at the National Conference on Higher Education, Association for Higher Education, March 14, 1966 (mimeographed).
30. Harold A. Haswell and Clarence B. Lindquist, eds., Undergraduate Curriculum Patterns. Washington, U. S. Government Printing Office, 1965.
31. Algo Henderson, Policies and Practices in Higher Education, p. 115. New York, Harper, 1960.

32. David F. Ross, "The Future of the Liberal Arts College," The Key Reporter, vol. 29, No. 1, Autumn, 1963. Earl McGrath also gave voice to a national concern when he reported the findings of the Institute of Higher Education: the undergraduate curriculum was "a collection of subject matter splinters...beyond the level of college students" (Memo to a College Faculty Member, p. 53. New York, Teachers College, Columbia University, 1961).

33. McGrath, op. cit., p. 6. Also see Brown and Mayhew, op. cit., p. 51. In one small school with a one-man English department, 32 courses were offered in English. The history department at a private university requiring 30 hours in the major offered 270 hours in history for undergraduates.

34. Otto F. Kraushaar, "How Changes in the School Curriculum Affect Colleges," The Changing College Preparatory Curriculum, p. 79. New York, College Entrance Examination Board, 1962.

35. David B. Truman, "The Relevance of the Liberal Arts to the Needs of Society," p. 2-3. Presented to the National Conference on Higher Education, Association for Higher Education, March 14, 1966 (mimeographed).

36. Education at Berkeley, op. cit., p. 5. Douglas Heath, moreover, points out that while the student entering college is better prepared than ever before, he may be overprepared ("But Are They Old Enough for College?" The Challenge of Curricular Change. New York, CEEB, 1966).

37. American Association of Theological Schools, "Statement on Preliminary Studies," p.1 (mimeographed).

38. William C. DeVane, "The Role of Liberal Education." Liberal Education, p. 198. May, 1964.

39. Originally reported by J. R. Warren, Journal of Counseling Psychology, vol. 8, No. 2, p. 164-69. Summer, 1961; cited by T. R. McConnell in Earl J. McGrath, ed., Universal Higher Education, p. 36. New York, McGraw-Hill, 1966.

40. Brown and Mayhew, op. cit., p. 4. According to a Harvard Business School survey, "only 8% of the graduates were doing what they had wanted to do when in college" (cited in C. E. Blocker, R. H. Plummer, and R. C. Richardson, Jr., The Two-Year College: A Social Synthesis, p. 214. Englewood Cliffs, N. J., Prentice-Hall, 1965).

41. Nevitt Sanford, "Implications for Education and for Adjustment of Curricula to Individual Students." In McGrath, ed., op. cit., p. 46.
42. Arvo E. Juola, "'No Preference' at Michigan State." University College Quarterly, vol. 11, No. 3, p. 10. March, 1966.
43. Freedman, "Pressures on Students," op. cit., p. 150.
44. Clark Kerr, The Uses of the University, p. 101. Cambridge, Mass.: Harvard University Press, 1963.
45. Gene Wise, "Integrative Education for a Dis-Integrated World," Teachers College Record, vol. 67, No. 6, p. 400. March, 1966.
46. Richard P. McKeon, "The Liberating Arts and the Humanizing Arts in Education." In Arthur A. Cohen, ed., Humanistic Education and Western Civilization, p. 175. New York: Holt, Rinehart and Winston, 1964.
47. William L. Kolb, "A College Plan Designed for Flexibility," The Challenge of Curricular Change, p. 59-60. New York, CEEB, 1966.
48. Truman, op. cit., p. 3.
49. Alfred North Whitehead, The Aims of Education and Other Essays, p. 1. New York, Macmillan, 1929.
50. Norman Charles, "The College Curriculum: An Annotated Bibliography of Recent Literature." Educational Record, vol. 46, No. 4, p. 440. Fall, 1965.
51. Education at Berkeley, op. cit., p. 131. See also Paul Dressel, The Undergraduate Curriculum in Higher Education, p. 63. Washington, Center for Applied Research in Education, 1963.
52. Joseph Tussman, "An Experimental Program in Individualizing Instruction at the University of California, Berkeley." University of South Florida Educational Review, vol. 5, No. 1, p.2-3. Spring, 1966.
53. DeVane, op. cit., p. 211-12. Also see his Higher Education in Twentieth-Century America, p. 144. Cambridge, Mass., Harvard University Press, 1965.

54. J. J. Schwab, "A Radical Departure in the Liberal Arts." Journal of General Education, Editorial Comment to vol. 15, April, 1963.

55. J. E. Burkett, "A Curriculum Leading to the Bachelor of Liberal Studies Degree." Educational Record, vol. 46, No. 3, p. 195-203. Summer, 1965. See also L. E. Dennis, ed., Education and a Woman's Life. Washington, American Council on Education, 1963.

56. The community colleges have been in a particularly difficult position, as is clearly reflected in the literature. A study recently completed at the Center for Research and Development in Higher Education suggests the abandonment of such categories as "terminal" and "transfer." See Dorothy M. Knoell and Leland L. Medsker, From Junior to Senior College: A National Study of the Transfer Student, p. 89. Washington, American Council on Education, 1965. John Lombardi recommends occupational programs which are "not closed or terminal"; see his "Occupational Education in California Junior Colleges." Educational Record, vol. 45, No. 2, p. 142-47. Spring, 1964.

57. Everett H. Hopkins, "The Leadership Role of Higher Education in Effecting Basic Societal Change." Presented at the National Conference on Higher Education, Association for Higher Education, March 14, 1966 (mimeographed).

58. Education at Berkeley, op. cit., p. 4-5.

59. Cited from The Moderator, a student publication (Spring, 1954, p. 3-5, in Joseph F. Kauffman, "Student Services: Some Questions and Recommendations." Education Record, vol. 45, No. 4, p. 363. Fall, 1964.

60. Stanford Today, Series 1, No. 15, p. 4. January, 1966.

61. Harland Randolph reported (in "The Northern Student Movement." Educational Record, vol. 45, No. 4, p. 390. Fall, 1964.) that tutorial projects involved more than 4,000 college students and 5,000 high school students in 1964; and Eric Cox described programs on a dozen American campuses in the same number of Educational Record ("The University and the Decaying American City," p. 397). The most recent summary of this development is given by Royce S. Pitkin and George Beecher, "Extending the Educational Environment: The Community as a Resource for Learning." In Samuel Baskin, ed., Higher Education: Some Newer Developments. New York: McGraw-Hill, 1965.

62. Remarks made on July 27, 1965, at a conference on "The Peace

Corps in an Educating Society," cited by Mary Hunt, "How Important and How Valid Are Off-Campus Learning Experiences?", p. 2.

Presented at the National Conference on Higher Education, Association for Higher Education, March 14, 1966 (mimeographed).

63. Eric Cox maintains academic credit should be given for "sustained work" (op. cit., p. 397); the Muscatine Report points out that "for the most part, the educationally valuable student work off-campus goes without recognition or credit," and it recommends that "all qualified students should be permitted to present for academic credit a limited amount of supervised field study of demonstrable intellectual value" (Education at Berkeley, op. cit., p. 137-38).

64. Joseph Axelrod, The Experimental Freshman-Year Program: Its Philosophic Bases, p. 4. Occasional Paper No. 1, August, 1966 (mimeographed).

65. Sanford, "Implications for Education," op. cit., p. 59. He also discusses the role of the faculty and the intellectual content of such experiences (p. 59-60).

66. Gardner, op. cit., p. 7. See also Brown and Mayhew, op. cit., p. 92, 101. Sidney G. Tickton, "The Outlook for Higher Education in the Big Cities." Proceedings of the Association of Urban Universities, 1965. Charles G. Dobbins, ed., The University, the City, and Urban Renewal. Washington, American Council on Education, 1964. The special supplement "Higher Education for Urban America." Educational Record, vol. 46, No. 3. Summer, 1965.

67. Percy W. Bidwell, Undergraduate Education in Foreign Affairs, p. 110. New York, King's Crown Press, 1962.

68. Education and World Affairs: Report on Program, 1963-1964. New York, Education and World Affairs, 1964.

69. Undergraduate Instruction in Critical Languages and Area Studies. Recommendations and report of a conference held at Princeton University, October, 1964. Non-Western Studies in the Liberal Arts College. Washington, Association of American Colleges, 1964. Donald N. Bigelow and Lyman H. Legters, eds., "The Non-Western World in Higher Education," Annals of the American Academy of Political and Social Science. November, 1964.

70. For the history of these centers, see Donald N. Bigelow and Lyman H. Legters, NDEA Language and Area Centers: A Report on the First Five Years. Washington, Government Printing Office, 1964.

Also Joseph Axelrod and Donald N. Bigelow, Resources for Language and Area Studies in the United States. Washington, American Council on Education, 1962.

71. Howard A. Reed, "Trends in Non-Western Studies in U. S. Liberal Arts Colleges." In G. Kerry Smith, ed., Current Issues in Higher Education, 1964, p. 178. Washington, Association for Higher Education, 1964. Reed's survey included larger urban institutions such as Portland State College and San Francisco State College as well as smaller liberal arts colleges. Examples of many experiments in a cross-cultural approach are listed in The College and World Affairs, op. cit., p. 36 ff.

72. Charles C. Cole, Jr., and Lanora G. Lewis, Flexibility in the Undergraduate Curriculum, New Dimensions in Higher Education, No. 13 (Washington: Government Printing Office, 1962), p. 56.

73. Paul Dressel, "A Look at New Curriculum Models for Undergraduate Education." In Smith, ed., Current Issues, 1964, op. cit., p. 145.

74. Robert F. Byrne, "Effective Teaching, Our First Need." The Challenge of Curricular Change, op. cit., p. 73. New York, CEEB, 1966.

75. DeVane, Higher Education in Twentieth-Century America, op. cit., p. 148-49.

76. Education at Berkeley, op. cit., p. 41.

77. Ibid., p. 39-63.

78. Sanford, The American College, op. cit., p. 419.

79. Jacob Klein, "On Liberal Education." The Liberal Arts Curriculum: Structure and Content, p. 5. St. Mary's College, Calif., St. Mary's College, 1965.

80. Benjamin S. Bloom, "Twenty-Five Years of Educational Research." American Educational Research Journal, vol. 3, No. 3, p. 217. May, 1966. Bloom mentions the researches on instructional approaches which are effective in bringing significant changes in "the higher mental processes," calling attention to the work of Dressel, Chausow, Glaser, Suchman, Newcomb, Sanford, Sarason, Stern, Houle, McCollough, McKeachie, Thelen, and Van Atta (ibid.).

81. Winslow R. Hatch and Ann Bennet, Effectiveness in Teaching. New Dimensions in Higher Education, No. 2, Washington, Government Printing Office, 1960. See also Winslow R. Hatch, Approach to Teaching. New Dimensions in Higher Education, No. 14, Washington, Government Printing Office, 1966.
82. Cited in Francis C. Rosecrance, The American College and Its Teachers, p. 141. New York, Macmillan, 1962.
83. Cited in Education at Berkeley, op. cit., p. 45. See also Clarence Leuba, "Student-Led Discussion Groups." In Winslow R. Hatch and Alice L. Richards, eds., Approach to Independent Study, p. 60-67. New Dimensions in Higher Education, No. 13, Washington, Government Printing Office, 1965.
84. Axelrod, "What Is the EFP?", op. cit., p. 2.
85. Ibid.
86. Mervin B. Freedman, "Effects of Peer Institutions," op. cit.
87. Carl R. Rogers, "Personal Thoughts on Teaching and Learning." Presented at the Harvard Conference on "Classroom Approaches to Influencing Human Behavior," April 4, 1952. Rogers' remarks appeared in Improving College and University Teaching, vol. 6, No. 1, p. 4-5. Winter, 1958. They were reprinted in Marilyn V. Miller, ed., On Teaching Adults: An Anthology, p. 68-70. Chicago, Center for the Study of Liberal Education for Adults, 1960.
88. Harold A. Haswell and Clarence B. Lindquist, Undergraduate Curriculum Patterns. Washington, Government Printing Office, 1965.
89. David B. Truman, "The Relevance of the Liberal Arts to the Needs of Society," p. 3. Presented at the National Conference on Higher Education, Association for Higher Education, March 14, 1966 (mimeographed).
90. Thomas C. Mendenhall, "The Care and Feeding of the Liberal Arts Curriculum." The Challenge of Curricular Change, op. cit., p. 64.
91. Kraushaar, op. cit., p. 80.
92. Thomas D. Terry, S. J. A Report of the First Year of the Santa Clara Plan (1964-65). Santa Clara, Calif., University of Santa Clara, 1965. Several of the large California institutions--University of

Southern California and University of California, Los Angeles, for example--have moved to the system of counting by courses.

93. A report by a statewide committee in California on foreign language articulation carries a section entitled "The Credit-Hour Structure in Colleges: A Primary Source of Articulation Problems in the Language Field." Foreign Language Articulation in California Schools and Colleges: Policy Recommendations of the Liaison Committee of Foreign Language, p. 5. Sacramento: State Department on Education, 1966.

94. Mendenhall, op. cit., p. 64.

95. William G. Cole, "Breaking the Grade-and-Credit Mold." The Challenge of Curricular Change, op. cit., p. 48-50.

96. Wesleyan University Bulletin, 1964-65, p. 123; cited in Education at Berkeley, op. cit., p. 133.

97. Woodring and Scanlon, eds., op. cit., p. 14. See also Paul Goodman's arguments in defense of the thesis that present grading and credit practices inhibit learning ("Does the Present Marking and Credit System Inhibit Learning?" Current Issues in Higher Education 1964, p. 123-25. New York, Association for Higher Education, 1964).

98. Record 1963, the Haverford College Yearbook (Scott Gilliam, editor-in-chief), p. 115-16.

99. Cole, op. cit., p. 46-47.

100. Education at Berkeley, op. cit., p. 91-104.

101. Norman D. Kurland, "New York College Proficiency Examination Program." In G. Kerry Smith, ed., Current Issues in Higher Education, 1963. Washington, Association for Higher Education, 1963. Jack N. Arbolino, Progress Report, February, 1966. New York, CEEB, Council on College Level Examinations, 1966. Paul Dressel et al., Evaluation in Higher Education, p. 253-300. New York, Houghton Mifflin, 1961.

102. Salvatore R. Maddi, "Fostering Achievement and the Cost of Doing So." Presented at the National Conference on Higher Education, Association for Higher Education, March 14, 1966, p. 4 (mimeographed). See also Winslow R. Hatch, What Standards Do We Raise? New Dimensions in Higher Education, No. 12, Washington, Govern-

ment Printing Office, 1963.

103. Lucien Price, ed., Dialogues of Alfred North Whitehead, p. 46. Boston: Little Brown, 1954.

104. Maddi, op. cit., p. 4.

105. William L. Kolb, "Resolving Conflicts in Institutional Responsibility," p. 2. Presented at the National Conference on Higher Education, Association for Higher Education, March 14, 1966 (mimeographed).

VII. ANNOTATED BIBLIOGRAPHY*

1. Association of American Colleges, Non-Western Studies in the Liberal Arts College. A Report of the Commission on International Understanding. Washington, 1964.

This volume traces the origins and growth of non-Western Studies in America, defines the present situation, and sharpens and formulates problems which colleges must solve if they are to introduce programs in language and area. Fourteen recommendations are given (p. 67-81), and there are valuable appendixes and statistical tables. Detailed and useful reports on individual programs constitute the bulk of the volume, p. 91-334.

2. Battle, J. A. "A Reaction to Professor Tussman's Undergraduate Program at Berkeley, or a Cosmopolitan Approach to Undergraduate Education in a Metropolitan University." University of South Florida Educational Review, vol. 4, No. 2, p. 21-29. Spring, 1966.

The author's basic criticism of the Tussman program is that it remains concept-oriented and book-centered, isolated from the "life" of its urban surroundings. The same point of view also finds the program of the Santa Cruz campus of the University of California lacking in basic necessities as an undergraduate model. The strengths of both plans are pointed out, however, especially their success in avoiding "depersonalized, mass-oriented curricula."

3. Baskin, Samuel, ed., Higher Education: Some Newer Developments. New York, McGraw Hill, 1965.

Chapters 1, 2, and 8 are particularly relevant to the topic of undergraduate models, for they deal with the new colleges, the curriculum, and the community as a resource for learning. The essays in this volume are of a uniformly high quality.

*The reader will wish to supplement this bibliography with four others, described below in Items 13, 41, 42, and 56. Note should also be taken of the fact that most of the references listed in the footnotes on the preceding pages have not been entered as items in this bibliography.

4. Beggs, David W., III, and Edward G. Buffie, eds., Independent Study: Bold New Venture, Bloomington: University of Indiana Press, 1965.

While the examples and the discussion in this collection of essays concentrate on independent study ventures on the elementary and secondary level, attention is also given to college level projects, especially the essay by William M. Rogge entitled "Independent Study is Self-Directed Learning," p. 9-27.

5. Bialosky, Marshall. "A Report on Professionally-Oriented Degrees in the Fine Arts." Palos Verdes: California State College at Palos Verdes, 1966 (mimeographed).

Degree curricula that focus on conservatory and studio programs (vs. musicology, art history, and criticism) are increasing. Their realization constitutes a problem for curriculum planners. The relationships between the creative arts and the liberal arts are explored here, practically and philosophically. There are appendixes concerning M.F.A. and M.Mus. degrees. The study has a bibliography of approximately 30 items.

6. Bidwell, Percy W. Undergraduate Education in Foreign Affairs. New York, Kings Crown Press, 1962.

A study of undergraduate programs in foreign affairs. As part of the study, a test was administered in 1960 to 1,900 students at 175 institutions. The results uncovered a "grave deficiency in higher education" (p. 110). In order to locate the responsibility for this deficiency, the study analyzes the organization and content of the curriculum, attitudes of students, and attitudes of teachers and administrators. Suggestions for curriculum revision are given.

7. Bigelow, Donald N. "The Center Concept and the Changing Curriculum," Higher Education, vol. 18, p. 12-16. July, 1962.

A brief, brilliant analysis of the changes wrought in college and university curricula since the introduction of the interdisciplinary center concept, in general, and the language and area center concept, in particular.

8. Blocker, Clyde E., Robert H. Plummer, and Richard C. Richardson, Jr., The Two-Year College: A Social Synthesis. Englewood Cliffs, N. J., Prentice-Hall, 1965.

The sequence of topics is as follows: history, function, social

milieu, control and financing, student body, faculty, administration, curriculum and instruction, student personnel program. The final chapter is on the future of two-year college. The presentation is systematic but not very exciting.

9. Brown, Hugh S., and Lewis B. Mahew, American Higher Education. New York, Center for Applied Research and Education, 1965.

Brief presentation of all the major problems in higher education in this country. Current trends are described (e.g., independent study, honors programs, work-study programs, overseas study programs, non-Western studies). The importance of the urban college and university in future developments is stressed. The authors gave themselves an enormous task and were fortunately able to maintain conciseness without allowing distortion to take place.

10. Burkett, J. E., "A Curriculum Leading to the Bachelor of Liberal Studies Degree," Educational Record, vol. 46, No. 3, p. 195-203. Summer, 1965.

The author describes a new degree program at the University of Oklahoma designed for adults which is called B.L.S. Planning for this program started in 1957-58. At the time the article was written, almost 600 students had enrolled, and a graduating class of 22 was awaiting commencement. The principles used to evaluate the program are also described.

11. California, University of, Education at Berkeley. A Report of the Select Committee on Education (Charles Muscatine, chairman). Berkeley, University of California, 1966.

An analysis of the educational system at Berkeley with 42 recommendations for reform: 12 on the improvement of teaching, one on advising, five on grading practices, three on the establishment of a board of educational development, seven on new courses and curricula, three on the letters and science undergraduate requirement, seven on graduate education, and four on practices regarding teaching assistants.

This is one of the most important volumes of the decade, not because the recommendations are significant in themselves (many of them are clearly political compromises and not likely to be far-reaching in effect), but because the analysis of problems which surrounds them is brilliant and profound.

12. Carmichael, Oliver C., Graduate Education: A Critique and a

Program. New York, Harper, 1961.

Presenting a searching analysis of the strengths and weaknesses of graduate education, this A.C.E. award-winning volume deals with problems directly relevant to undergraduate curricula. It contains, for one thing, a statement of the entire context of liberal, pre-professional, and professional education into which the graduate school fits; in addition, much attention is given to the plan suggesting a three-year master's degree beginning with the junior year. There is an extensive bibliography. This is a monumental volume in its insight and eloquence.

13. Charles, Norman, "The College Curriculum: An Annotated Bibliography of Recent Literature." Educational Record, vol. 46, No. 4, p. 439-56. Fall, 1964.

An indispensable list for any student of higher education. It includes both books and articles; under general and liberal education, there are about 35 entries; under subject matter areas, there are about 40 entries; and under general considerations, there are more than 50 entries. The annotations are brief and accurate.

14. Cohen, Arthur A., ed., Humanistic Education and Western Civilization: Essays for Robert M. Hutchins. New York, Holt, Rinehart and Winston, 1964.

This is a fabulous collection of essays. Section 1, "Democratic Values in Western Civilization," has pieces by Mortimer J. Adler and William O. Douglas among others. Section 2, "The Past and Future of Humanistic Education," has essays by O. Meredith Wilson, F. Champion Ward, Rexford G. Tugwell, Richard P. McKeon, David Riesman, Milton Mayer, and John C. Murray.

15. Cohen, Joseph W., ed., The Superior Student in American Higher Education. New York, McGraw-Hill, 1965. (Carnegie Series in American Education.)

A collection of useful essays, beginning with an overview of the honors program movement by the editor, and ending with an excellent evaluation survey of honors programs by Paul A. Heist and Lois E. Langland.

Key issues, according to the editor, are "What is the purpose of an honors program? What should be the balance between general and departmental honors? What makes a good honors teacher? Should honors be confined to liberal arts, or do they have a place in pro-

fessional and technical colleges and universities? Are honors equally suited to all subjects? How can we tell what a given honors program is achieving?"

16. College Entrance Examination Board, The Challenge of Curricular Change. New York, CEEB, 1966.

A volume of essays growing out of the 1965 Colloquium on Curricular Change. Models for breaking the grade-and-credit mold, for achieving curricular flexibility, for rewarding effective teaching (without which curricular change is only an empty shell) are excitingly presented. Indispensable reading for students at all levels in the curriculum field.

17. College Entrance Examination Board, The Changing College Preparatory Curriculum. Princeton, N. J., CEEB, 1962.

Papers given at the 1961 Colloquium on College Admissions. Some of the papers (e.g., "How the Changes in the School Curriculum Affect Colleges," by Otto M. Kraushaar) are particularly germane to undergraduate curriculum development.

18. Denemark, George W., "Concept Learning: Some Implications for Teaching." Liberal Education, p. 54-70. March, 1965.

An important contribution to the distinction between simple subject matter as the primary object of transmission from professor to student and the goals of more sophisticated courses and curricula, particularly the teaching of methods of inquiry in a particular subject matter rather than mere transmission of the most recent information.

19. Dennis, Lawrence E., ed., Education and Woman's Life. Proceedings of the Itasca Conference on the Continuing Education of Women. Washington, American Council on Education, 1963.

These papers report significant institutional experience with the training of adults in programs leading to baccalaureate degrees. Experiences at Sarah Lawrence, Minnesota, Rutgers, Radcliffe, and Brooklyn indicate that programs designed for college-age youth do not motivate adults, nor do they "take" as well as one would expect. Hence, new and quite exciting programs have had to be specially designed. The evidence makes this reviewer wonder whether the curricula found inappropriate for older adults are really appropriate for younger adults in the first place.

20. DeVane, William C., Higher Education in Twentieth-Century America. Cambridge, Mass., Harvard University Press, 1965.

This is a consistently objective analysis moving rigorously to the center of several major problems. A large part of the volume is historically oriented, with two final chapters on contemporary problems. Curricular issues appear most explicitly in the chapter, "University Study," p. 85-120.

21. Dobbins, Charles G., ed., The University, the City, and Urban Renewal. Report of a Conference Sponsored by the American Council on Education and the West Philadelphia Corporation. Washington, American Council on Education, 1964.

Out of this series of papers comes a new conception of the tasks of the urban college and university. Clear presentations, skillfully edited.

22. Dressel, Paul L., and Margaret F. Lorimer, Attitudes of Liberal Arts Faculty Members Toward Liberal and Professional Education. New York, Institute of Higher Education, Teachers College, Columbia University, 1960.

The seventh in a series of studies dealing with liberal and professional education and their relationships. Based on data gathered from a 50-item inventory. Returns amounted to almost 1,200. An excellent presentation and interpretation of data.

23. Dressel, Paul L., The Undergraduate Curriculum in Higher Education. Washington, Center for Applied Research and Education, 1963.

An informed and systematic analysis of the conflict between the general and specialized goals of undergraduate studies today, ending with a set of sensible rules for curriculum development. An unannotated bibliography of about 35 items is included.

24. Dressel, Paul L., "A Look at Curriculum Models for Undergraduate Education." Journal of Higher Education, vol. 36, p. 89-96. February, 1965.

Section 1 outlines the major circumstances which require the development of new models; Section 2 outlines the rationale of new models. Sound and practical.

25. Dressel, Paul L., "Curriculum Theory and Practice in Undergraduate Education." North Central Quarterly, vol. 40, No. 3. Winter, 1966.

Eight central concepts of curriculum development are explored as to their use and interpretation in 47 colleges and universities.

26. English, Commission on, Freedom and Discipline in English. New York, College Entrance Examination Board, 1965.

While focusing on the preparation of English teachers, the report has much to say about the general English curriculum, especially the study of language and linguistics, of literature, and of writing. Three bibliographies on these three major topics are included.

27. Estrin, Herman A., ed., Higher Education in Engineering and Science. New York, McGraw-Hill, 1963.

A large number of essays is included in this volume, covering the significant phases of teaching in engineering, mathematics, and the natural sciences. The essays deal with resources (e.g., library, laboratory, television) as well as the nature of learning, examinations and grades, and professional development of faculty members.

28. Estrin, Herman A., and Delmer M. Goode, College and University Teaching. Dubuque, Iowa, William C. Brown Company, 1964.

About 125 articles by 89 authors were selected from Improving University and College Teaching, representing many points of view in a large number of disciplines. Articles in Part III, entitled "Curriculum and Method in College Teaching," carry reports of many institutional and personal experiences in curriculum development.

29. Fields, Ralph R., The Community College Movement. New York, McGraw-Hill, 1962.

Curricula are discussed in relationship to other issues which face the community college. Descriptions of programs are given of Orange County Community College, Middletown, N. Y.; Long Beach City College; the junior college of the University of Bridgeport; and the junior college at Tyler, Texas. Descriptions of these four colleges are extensive, occupying 140 pages. The last section is a cogent presentation of present and future issues at the core of community college development.

30. Gerber, J. C., J. H. Fisher, and C. A. Zimansky, eds., The College Teaching of English. New York, Appleton-Century-Crofts, 1965.

An outstanding collection of essays, stressing the relationship

between the content of a curriculum and the implementation of that content by the college classroom teacher. A fitting companion piece to item 26 above.

31. Haswell, Harold A., and Clarence B. Lindquist, Undergraduate Curriculum Patterns: A Survey of Baccalaureate Programs in Selected Fields, 1962-63. Washington, Government Printing Office, 1965.

Disciplines studied were English, Speech and Drama, Spanish, History, Political Science, Sociology, Chemistry, Physics, Mathematics, General Biology, Botany, and Zoology; Engineering (18 different fields); and Agriculture (83 different curriculums). Carefully compiled and presented.

32. Hatch, Winslow R. (series coordinator), New Dimensions in Higher Education, Nos. 1-14. Washington, Government Printing Office, 1960-1966.

A series of 14 pamphlets dealing with developments in higher education. Of particular relevance to undergraduate curriculum development are No. 9 (Lanora G. Lewis, The Credit System), No. 10 (Charles C. Cole, Jr., and Lanora G. Lewis, Flexibility in the Undergraduate Curriculum), No. 13 (Winslow R. Hatch and Alice L. Richards, eds., Approach to Independent Study), and No. 14 (Winslow R. Hatch, Approach to Teaching). This series is indispensable for any serious student in this field.

33. Johnson, B. L., "Needed: Experimental Junior Colleges." Junior College Journal, vol. 36, p. 17-20. October, 1965.

In a survey of experimental colleges, the junior colleges are conspicuous by their absence. The author presents some suggestions to fill this gap.

34. Knoell, Dorothy, and Leland L. Medsker, From Junior to Senior College: A National Study of the Transfer Student. Washington, American Council on Education, 1965.

The study involved 10,000 students, 345 two-year institutions, and a diverse group of 43 senior colleges and universities to which these junior colleges transfer. Analysis of issues is sharp and solutions offered are reasonable.

35. Leyden, Ralph C., ed., The Stephens College House Plan: Experimentation and Evaluation. Columbia, Mo., Stephens College, 1966.

Description and evaluation of the first three years of the House Plan at Stephens. The final summary and appraisal is by Lewis Mayhew, who concludes that the experiment "has demonstrated the feasibility of such an organization" (p. 91).

36. Liberal Education (Bulletin of the Association of American Colleges), Reflections on the Role of Liberal Education. Washington, Association of American Colleges, 1964.

This particular issue of Liberal Education, May, 1964, is in fact the vehicle for disseminating the seven papers which were presented at the annual meeting of the association that year. Authors are Maurice Bowra, William DeVane, Whitney Oates, Huston Smith, Robert Hutchins, Lee DuBridge, and George Shuster.

37. McGrath, Earl J., Liberal Education in the Professions. New York, Institute of Higher Education, Teachers College, Columbia University, 1959.

This pamphlet supplies the theoretical context within which the other reports on professional programs from McGrath and his associates can best be understood. The other reports in the same series include programs in agriculture, business administration, education, engineering, journalism, music, nursing, and pharmacy. Graduates in those fields accounted for 52 per cent of the undergraduate degrees awarded in the United States at the time this study was written.

38. McGrath, Earl J., Memo to a College Faculty Member. New York, Institute of Higher Education, Teachers College, Columbia University, 1961.

An influential study based on careful research related to problems of curricular structure, the use of staff, and the employment of institutional resources in American undergraduate institutions. The first section describes the methodology and the dynamics of curricular change. Subsequent sections present statistical and attitudinal data.

39. McGrath, Earl J., ed., Universal Higher Education. New York, McGraw-Hill, 1966.

This volume is a product of the conference on the implications of universal higher education held in 1964. The two chapters most germane to curriculum development are by Nevitt Sanford ("Implications for Education and for Adjustment of Curricula to Individual Students") and by James W. Reynolds ("Needed Changes in Purposes

and Programs of Community Colleges"). Both these statements are especially valuable to curriculum planners.

40. Mayhew, Lewis B., "Liberal Arts and the Changing Structure of Higher Education." Liberal Education, vol. 51, p. 366-78. October, 1965.

An analysis of undergraduate curricular changes necessitated by the changing purposes higher education serves. Both principles and examples are given. Sound and clear.

41. Mayhew, Lewis B., "The Literature of Higher Education." Educational Record, vol. 46, No. 1, p. 5-32. Winter, 1965.

A review of the literature of higher education published in book form in 1964. Analytic in its approach and cogent in presentation. Indispensable for students in the field.

42. Mayhew, Lewis B., "The Literature of Higher Education, 1965." Educational Record, vol. 47, No. 1, p. 18-49. Winter, 1966.

Again, as in item 41, limited to studies on higher education in book form, the article reviews the wide sweep of materials with the same keenly analytic approach. This time a useful bibliographical list has been added.

43. Mayor, John R., and Willis G. Swartz, Accreditation in Teacher Education: Its Influence on Higher Education. Washington, National Commission on Accrediting, 1965.

Chapter 11, "College and University Curriculums," analyzes the effect on college and university curricula of NCATE and state accreditation in teacher education (p. 146-63).

44. Modern Language Association, The Education of the Modern Language Teacher for American Schools. New York, Modern Language Association, 1966.

A report of a 23-man committee headed by Joseph Axelrod which analyzes the impact of NDEA institutes in modern foreign languages on degree curricula in the modern language field. Section III carries recommendations for undergraduate curricular development.

45. Schwab, Joseph J., et al., The Structure of Knowledge and the Curriculum. Chicago, Rand-McNally, 1964.

This volume is a product of a San Jose State College conference on the structure of knowledge. It pulls together much of the current theory on the use of the structure of knowledge as a basis for curricular development.

46. Smith, G. Kerry, ed., Current Issues in Education: Undergraduate Education. Washington, Association for Higher Education, 1964.

Proceedings of the 19th annual National Conference on Higher Education, which was entirely devoted to undergraduate education. Sixteen of the papers relate directly to undergraduate curricular problems and constitute an unusually rich resource.

47. Singer, Milton, ed., Introducing India in Liberal Education. Chicago, University of Chicago Press, 1957.

Robert Redfield, W. Norman Brown, Richard L. Park, and Robert Crane each contribute an essay on the topic: Indian civilization as a unit of course organization. Other essays deal with the study of Hinduism, the role of philosophy, the treatment of literature, and the teaching of art and music in a course in Indian civilization. The last section deals with collections of readings and methods of teaching.

48. Stickler, W. Hugh, ed., Experimental Colleges: Their Role in American Higher Education. Tallahassee, Florida State University, 1964.

Eleven experimental undergraduate institutions present their programs--Antioch, Stephens, New College (Sarasota), Parsons, the University of the Pacific "cluster" colleges, Florida Presbyterian, University of Michigan (Dearborn campus), Michigan State, University of California (Santa Cruz campus), Monteith, and Florida State. A critique and summary by B. Lamar Johnson closes the volume. Informative and exciting.

49. Stoddard, G. D., "New Design for the College of Liberal Arts and Sciences." School and Society, vol. 93, p. 265-67. May 1, 1965.

An imaginative plan with an entirely new point of departure for solving the "breadth vs. depth" dilemma.

50. Theological Education, vol. 1, No. 3. Spring, 1965.

The entire issue of this journal, the quarterly of the American Association of Theological Schools, is devoted to the subject of pre-seminary education. Much of the discussion centers on the Bridston-Culver report (Keith R. Bridston and Dwight W. Culver, Pre-Seminary Education, Minneapolis, Augsburg, 1965.) and its recommendations for undergraduate study.

51. Toews, E. O., "Present Status of Junior College Education in California: Types of Educational Programs." California Education, vol. 2, p. 14-15. May, 1965.

A review of vocational and technical programs, general education programs designed for transfer purposes, and community education programs, together with guidelines for curriculum planners.

52. Truman, David B., "The Changing Character of Undergraduate Education." School and Society, vol. 92, p. 380-83. December 12, 1964.

A discussion of the changing nature of secondary education, of students' educational plans and expectations, and of graduate school demands in an analysis of recent developments, at Columbia and elsewhere, of undergraduate curricula.

53. Tussman, Joseph, "An Experimental Program in Individualizing Instruction at the University of California, Berkeley." University of South Florida Educational Review, vol. 5, No. 1, p. 1-19. Spring, 1966.

The historical and philosophical background of the famous "Tussman Program" at Berkeley.

54. Tuttle, Donald R., assisted by Helen O'Leary, Curriculum Patterns in English: Undergraduate Requirements for the English Major. Washington, Government Printing Office, 1965.

The sample on which this study is based was selected from 696 liberal arts institutions and 143 universities awarding the bachelor's degree in English. The sample consisted of 267 departments.

The median graduation requirement in these departments comes to 126 or 128 semester hours, depending upon the degree. Honors programs are given at 23 institutions; 32 require a senior thesis or essay. Changes in requirements during the years covered by the survey show a trend toward a larger number of fixed requirements and less leeway for student choice.

55. Undergraduate Instruction in Critical Language and Area Studies. Princeton, N. J., Princeton University, 1964.

Recommendations and report of a conference held at Princeton in October, 1964. The disciplines of linguistics and of language and area study, liberal arts college administrations, government agencies, and educational foundations were represented. Many of the participants also had a professional interest in the various cultures of Africa, Asia, Latin America, the Near East, and Russia.

Knotty problems in undergraduate curricula--such as the relationship between area studies and instruction in the critical languages--are discussed. Eight recommendations are made. A clear presentation, with reasonable recommendations, of a complex and important development in undergraduate education.

56. Wilson, Howard E., and Florence H. Wilson, American Higher Education and World Affairs. Washington, American Council on Education, 1963.

This is the last of the series of eight volumes constituting the studies on world affairs supported by the Carnegie Endowment for International Peace. A Chapter deals with the responsibilities of undergraduate colleges for preparing citizens adequately; other chapters deal with international studies curricula on various campuses, international exchange of students and faculty, and Federal programs in the international field. Curricula at a half-dozen major institutions are described.

57. Wilson, Logan, ed., Emerging Patterns in American Higher Education. Washington, American Council on Education, 1965.

Part 2 has five essays related to undergraduate curricular developments: Joseph Axelrod, "New Patterns of Internal Organization"; Mary W. Bennett, "Changes Within the Liberal Arts College"; David Riesman, "Alterations in Institutional Attitudes and Behavior"; John E. King, "Changes in the State College System"; and Leland L. Medsker, "Changes in the Junior Colleges and Technical Institutes." Axelrod's essay has a bibliography of 66 items; all but two or three are directly concerned with curricular development.

58. Winthrop, H., "Interdisciplinary Developments in Undergraduate Education." Science Education, vol. 49, p. 410-19. December, 1965.

The new interdisciplinary fields in the sciences (e.g., computer theory, cybernetics, systems theory) can be taught, the author

claims, to undergraduates. He illustrates his point from the field of information theory.

59. World Affairs Committee, The College and World Affairs. Washington, Committee on the College and World Affairs, 1964.

Part I analyzes the changing world and its impact on curricular change. Part II deals with faculty and teaching resources. Part III deals more directly with curricular problems: cross-cultural approaches in the disciplines, foreign area studies, foreign language study, study abroad, cocurricular programs, and teacher education. The bibliography (p. 68-74) contains almost 90 items, carefully selected and, in many cases, annotated. It is a rich bibliographical source in the field of foreign area studies.

John W. Nason, committee chairman, and George M. Beckmann, study director, are to be congratulated for having prepared this important statement.

REACTIONS

In order for this second series of "New Dimensions in Higher Education" to better serve the needs of colleges and universities throughout the nation, reader reaction is herewith being sought. In this instance, with respect to New Patterns in Undergraduate Education: Emerging Curriculum Models for the American College, the following questions are asked:

1. Can you suggest other completed research, the results of which would add significantly to this report?
2. What problems related to this subject should be given the highest priority, in terms of further research?
3. What helpful suggestions do you have for institutions and faculty members interested in improving their undergraduate curricula?
4. What has your institution done, or what does it propose to do, about changing or improving its undergraduate curriculum?
5. What can the United States Office of Education do to help colleges and universities help themselves?

Kindly address reactions to:

Dr. Winslow R. Hatch
Bureau of Higher Education Research
Office of Education
U. S. Department of Health, Education, and Welfare
Washington, D. C. 20202